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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 10/719,515 | 11/20/2003 | James Clifford Anderson | 200309574-1 | 3020 |

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HEWLETT PACKARD COMPANY
 P O BOX 272400, 3404 E. HARMONY ROAD
 INTELLECTUAL PROPERTY ADMINISTRATION
 FORT COLLINS, CO 80527-2400

EXAMINER

OLSON, JASON C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2651

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/719,515

Applicant(s)

ANDERSON ET AL.

Examiner

Jason C Olson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 10-12, 17, 19-21, 26, 28-30 and 35 is/are rejected.
- 7) ☒ Claim(s) 4-7, 9, 13-16, 18, 22-25, 27, 31-34 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8, 10-12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chliwnyj et al. (US 5,828,514), hereafter Chliwnyj.

Regarding claim 1, Chliwnyj teaches receiving data when operating in a write mode (see col. 5, ln. 22-42; it is interpreted by the examiner that when writing data to the magnetic tape, the channel receives data); passing magnetic tape across an electromagnetic head (see col. 5, ln. 24-30); varying drive current to the electromagnetic head according to the data when operating in a write mode (see col. 5, ln. 22-42; it is interpreted by the examiner that when writing data to the tape, the drive current is varied according to the data); sensing current induced in the electromagnetic head when operating in a read mode (see col. 5, ln. 22-42; it is interpreted by the examiner that when the reading data from the tape, current induced in the head is sensed); sensing vibration imparted to a tape transport mechanism (see col. 9, ln. 21-26; it is interpreted by the examiner that the detecting movement of the head relative to the frame or transport mechanism constitutes sensing vibration); and adjusting position of the electromagnetic head according to the sensed vibration (see col. 9, ln. 26-40).

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Regarding claim 2, Chliwnyj teaches sensing the vibration comprises generating an electrical signal according to the vibration experienced by a tape transport mechanism (see col. 9, ln. 26-40).

Regarding claim 3, Chliwnyj teaches generating a correction signal based on vibration information (see col. 9, ln. 32-36); and positioning the electromagnetic head according to the correction signal (see col. 9, ln. 36-40).

Regarding claim 8, Chliwnyj teaches sensing a position of the magnetic tape relative to the electromagnetic head (see col. 8, ln. 15-21); and adjusting the position of the electromagnetic head according to the sensed position of the magnetic tape (see col. 8, ln. 21-27).

Regarding claims 10-12 and 17: Apparatus claims 10-12 and 17 are drawn to the apparatus corresponding to the method of using same as claimed in claims 1-3 and 8. Therefore apparatus claims 10-12 and 17 correspond to method claims 1-3 and 8, and are rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-21, 26, 28-30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chliwnyj and Holmes et al. (US 2003/0067703), hereafter Holmes.

Regarding claim 19, Chliwnyj teaches tape transport mechanism for transporting magnetic tape (see col. 5, ln. 24-30); interface module capable of generating a head drive signal according to received data (see col. 5, ln. 22-42); electromagnetic head capable of generating a magnetic field according to the head drive signal (see col. 5, ln. 22-42); sensing vibration imparted to the tape transport mechanism in a control axis (see col. 9, ln. 21-26); and head position control system capable of adjusting the position of the electromagnetic head along the control axis according to the sensed vibration (see col. 9, ln. 26-40). Chliwnyj fails to teach the sensor is an accelerometer, however, Holmes is relied upon to teach a sensor that is accelerometer (see paragraph 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon motion detection of Chliwnyj by applying the teaching of an accelerometer as taught by Holmes for the reasons as stated by Holmes in paragraph 46.

Regarding claim 20, the combination of Chliwnyj and Holmes teaches all the limitations of claim 19 above. The combination is further relied upon to teach the accelerometer (or motion sensor) is attached to the tape transport mechanism (see col. 9, ln. 21-30 and figure 9, item 914 of Chliwnyj; it is interpreted by the examiner that the vibration or motion sensor is coupled to the tape transport mechanism) and is capable of generating a vibration indicative signal according to vibration along the control axis (see col. 9, ln. 31-40 of Chliwnyj).

Regarding claim 21, the combination of Chliwnyj and Holmes teaches all the limitations of the claims above. The combination is further relied upon to teach correction signal generator capable of generating a correction signal based on the vibration indicative signal received from the accelerometer (or motion sensor) (see col. 9, ln. 32-36 of Chliwnyj); and head position

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actuator capable of positioning the electromagnetic head according to the correction signal (see col. 9, ln. 36-40 of Chliwnyj).

Regarding claim 26, the combination of Chliwnyj and Holmes teaches all the limitations of the claims above. The combination is further relied upon to teach tape position sensor capable of generating a tape position signal according to the position of the magnetic tape (see col. 8, ln. 15-21 of Chliwnyj) wherein the head position control system further is capable of adjusting the position of the electromagnetic head according to the tape position signal (see col. 8, ln. 21-27 of Chliwnyj).

Regarding claims 28-30 and 35: Claims 28-30 and 35 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above.

Allowable Subject Matter

Claims 4-7, 9, 13-16, 18, 22-25, 27, 31-34, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach alone or in combination vibration limiter capable of limiting vibration frequencies of a chassis whereon the electromagnetic head is mounted in accordance with the frequency response of head positioning; vibration signal receiver capable of receiving a vibration indicative signal from the vibration sensor; and vibration signal processor capable of modifying the vibration indicative signal by applying compensation in order to improve the response of head positioning; vibration signal receiver capable of receiving a vibration indicative signal from the vibration sensor; and vibration signal processor capable of modifying the vibration indicative signal by applying

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prediction in order to improve the response of head positioning; generating a signal that precludes variations in the drive current to the electromagnetic head when the sensed vibration exceeds a pre-established rate of change.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C Olson whose telephone number is (571)272-7560. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Hudspeth can be reached on (571)272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JCO
March 15, 2005


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600